



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/055,310	01/22/2002	Hamid Noorbakhsh	4150D1/ETCH/DRIE/JB1	9294
32588	7590	01/22/2004		
APPLIED MATERIALS, INC. 2881 SCOTT BLVD. M/S 2061 SANTA CLARA, CA 95050			EXAMINER ALEJANDRO MULERO, LUZ L	
			ART UNIT 1763	PAPER NUMBER

DATE MAILED: 01/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action**

Application No.

10/055,310

Applicant(s)

NOORBAKHS ET AL.

Examiner

Luz L. Alejandro

Art Unit

1763

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 15 December 2003 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

**PERIOD FOR REPLY [check either a) or b)]**

- a) ☐ The period for reply expires \_\_\_\_\_ months from the mailing date of the final rejection.
- b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on \_\_\_\_\_. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☒ The proposed amendment(s) will not be entered because:
- (a) ☒ they raise new issues that would require further consideration and/or search (see NOTE below);
  - (b) ☐ they raise the issue of new matter (see Note below);
  - (c) ☒ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
  - (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: See Continuation Sheet.

3. ☒ Applicant's reply has overcome the following ~~rejection~~ <sup>objection</sup> (s): the objection to the drawings and to the specification.
4. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☒ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: \_\_\_\_\_.

Claim(s) objected to: \_\_\_\_\_.

Claim(s) rejected: 1-39.

Claim(s) withdrawn from consideration: \_\_\_\_\_.

8. ☐ The drawing correction filed on \_\_\_\_\_ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_.
10. ☐ Other: \_\_\_\_\_

*Luz L. Alejandro*  
Luz L. Alejandro  
Primary Examiner  
Art Unit: 1763

Continuation of 2. NOTE: the amendment to the claims, for example claim 36, raise new issues that would require further consideration and/or search.

Continuation of 5. does NOT place the application in condition for allowance because: Applicant argues with respect to claims 1-3 and 5 that the combination of Shan et al. and Lee is improper. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Furthermore, as broadly interpreted, Shan et al. does disclose a passage in the inner liner wall, as stated by the examiner (see fig. 1). While this can be considered a passage as pointed out by the examiner, the passage being relied upon by the examiner to show the inlet and outlet adapted to circulate a fluid through as required by independent claim 1 is shown and described in the secondary reference of Lee. Moreover, the secondary reference of Lee provides motivation to modify Shan et al. so as to control the temperatures exposed to the gases (plasma). Since the apparatus of Shan is cylindrical, it follows that the passages would need to be annular to cover the exposed surfaces. Concerning applicant's statement that neither Shan et al. or Lee teach liners, it is clear in fig. 1 that a liner covers the walls of the apparatus, and therefore it would be necessary to control the temperature of this liner since it is the object exposed to the plasma. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Concerning claims 11-12, 14-17, and 20-23, applicant argues that both Shan and Lee fail to suggest a chamber liner adapted to be removably disposed in a processing region and having a base for substantially covering the bottom of the processing chamber and a passage formed at least partially in the base. As for the liner being removable, it appears from Shan that the liner in the primary reference is removable via a variety of fasteners (see fig. 1). Furthermore, motivation was provided previously for forming a passage in the surfaces exposed to the gases (plasma) within the chamber.

Concerning claim 4, applicant argues that the references fail to show or render unobvious the limitation of "a magnet disposed in the inner wall". The examiner respectfully submits that a broad reasonable interpretation of the meaning of "inner wall" is clearly met by the Collins '953 reference. Regarding the fact that Collins '953 fails to teach a magnet disposed within the inner liner, it is noted that the features upon which applicant relies are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivation to combine Collins into the Shan et al. and Lee references is, for example, in order to confine the plasma thereby attaining better controllability. Moreover, there is clearly support for claim 19 because in Collins the magnets are located near the pumping port to confine the plasma (see fig. 1) and in fig. 1 of Shan et al. the region near the pumping port has lips extending into the processing chamber so it would have been obvious to modify the apparatus of Shan to insert the magnets in this lip portion.

With respect to rejections involving the Reimold et al. reference, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Concerning the rejection of claim 24 using the Banholzer reference, applicant argues that Banholzer teaches away from the Lee reference. However, the Lee reference is relied upon to show temperature control of the portions of the liner exposed to the plasma and therefore the rejection is still proper.

Concerning the rejection of claims 11-12, 14-17, and 20-23, the base for covering the bottom of the processing chamber is shown by Shan et al. and the motivation for forming the passage in the base is provided by Masuda for the reasons in the final rejection and therefore the rejection is maintained.

Concerning the rejection of claims 11-12, 14-17, and 20-23, the base for covering the bottom of the processing chamber is shown by Pu et al. and the motivation for forming the passage in the base is provided by Masuda for the reasons in the final rejection and therefore the rejection is maintained.

Regarding the rejection of claims 18-19 over Pu et al. in view of Masuda and further in view of Collins, the base for covering the bottom of the processing chamber is shown by Pu et al. and the motivation for forming the passage in the base is provided by Masuda for the reasons in the final rejection and therefore the rejection is maintained.

With respect to the rejection of claim 24 using the Banholzer reference in conjunction with Pu et al., applicant argues that Pu et al. and Banholzer teach away from each other. However, this analysis appears to be inaccurate because the fact that particles do or do not adhere to the exposed portions appears to be more of a result of an intended use of the apparatus than a structural limitation and it is not clear where Pu et al. discourages or teaches the prevention of particles depositing on the exposed portions.

Concerning the rejection of claims 11-12, 14-17, and 20-23, the base for covering the bottom of the processing chamber is shown by Pu et al. and the motivation for forming the passage in the base is provided by Lee for the reasons in the final rejection and therefore the rejection is maintained..